

# The Spanish Emergency Military Unit: Military Capabilities in a Civilian Environment

A Monograph

by

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## **Abstract**

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The involvement of military units in emergencies is not a twenty-first century invention. For ages, armies have supported civilian authorities in relief efforts through their unique capabilities. In 2005, following several natural and man-made disasters, the government of Spain decided to create a new permanent unit within the national civil protection system. The *Unidad Militar de Emergencias* or Emergency Military Unit (UME) had to have special capabilities beyond the traditional kinetic and lethal ones. Eight years later, the new unit has reached its full mission capability. However, do their unique capabilities fulfill the civil requirements for major disasters and add value within the system?

This study addresses the UME preparation and readiness to accomplish a defined military requirement pattern requested by civil authorities defined by US case studies. The first section of the paper provides a description of the UME within the national civil protection system. The second section examines the three US case studies Hurricanes Andrew, Katrina, and Sandy to look for the pattern. The third section of the paper presents the comparison of the pattern with the current UME capabilities, and therefore the value within the system.

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## Acronyms

C2	Command and Control
DOD	Department of Defense
FEMA	Federal Emergency Management Agency
HAZMAT	Hazard Material
JTF	Joint Task Force
SAR	Search and Rescue
UME	<i>Unidad Militar de Emergencias</i> (Emergency Military Unit)
USNORTHCOM	US Northern Command

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## Introduction

The *Unidad Militar de Emergencias* in no more than five years has become a mainstay of the safety of the citizens of this country, a cornerstone of national security.

—President Jose L. Rguez. Zapatero, Lorca-Murcia, 13 May 2011<sup>1</sup>

According to social scientist Volker Bornshier, “Social structure is the result of the interaction of such conflicting principles, namely striving after power, the striving after efficiency [self-determination and economic progress] and security, and the claim to equality.”<sup>2</sup> All Western societies tend to claim the need for freedom, equality, and human and material security in their daily lives.<sup>3</sup> Within them, protecting the economy, justice, environment, health, or public safety as part of the general welfare system is a main task for any public administration. Since the end of the Cold War, Western populations, broadly speaking, have shifted their energies from collective to individual security, and due to the September 11 attacks, this individual attitude, dramatically influenced by mass media, is preponderant rather than the collective one.<sup>4</sup>

Spain has followed the same sociological path. The Spanish Constitution states in its article 15 that every citizen has the right to life as well as keeping their physical and moral integrity. Article 17 reinforces the citizen’s right to liberty and security.<sup>5</sup> Hence, there is a legal

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<sup>1</sup> Gobierno de España, “Declaración del presidente del Gobierno durante su visita a Lorca,” Palacio de la Moncloa, accessed 15 March 2015.  
<http://www.lamoncloa.gob.es/presidente/intervenciones/paginas/2011/prot20110513.aspx/>

<sup>2</sup> Volker Bornshier, *Western Society in Transition* (New Brunswick, NY: The State University, 1996), 4.

<sup>3</sup> *Ibid.*, 24.

<sup>4</sup> Concepción Anguita Olmedo and M<sup>a</sup> Victoria Campos Zabala, “La globalización de la inseguridad,” *Revista de Relaciones de Internacionales de la UNAM*, no. 101-102 (May-December 2008): 16.

<sup>5</sup> Spanish Congress, Constitución Española, 27 December 1978, *Boletín Oficial del Estado* no. 311 (Madrid, 29 December 1978), article 15 and article 17.

obligation for any administration to defend these fundamental rights by approving specific regulations and creating adequate response mechanisms. As an example, the evolution of the perceived risks and threats within the Spanish Security Strategy has shifted from 2003 to 2013. Recently, the government has identified menaces and hazards that can more directly affect the population. Menace such as the threats to critical facilities and essential services, organized crime, and economic and financial instability, add to the current list of more traditional hazards to create one general list of situations requiring military intervention (see table 1). As the table demonstrates, over the last ten years the Spanish perception of potential threats changed the collective approach to one more individualist.<sup>6</sup> In this general framework, managing situations of serious risk, catastrophe, or public calamity, is one of the most valued and demanded fields. Spain, like other developed countries, is highly concerned about safeguarding the safety and welfare of its citizens, property, and environment.<sup>7</sup>

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<sup>6</sup> According to Roldán, “Nowadays, citizen increasingly requires that the state is the guarantor of their global security. A requirement that exceeds daily demands to new requirements: to respond effectively and to guarantee the challenges that threatens their safety and welfare.” José E. Roldán Pascual, “De la Brigada de Artillería Volante a la Unidad Militar de emergencias,” *Memorial de Artillería* no. 166/2 (December 2010): 81.

<sup>7</sup> José E. Roldán Pascual, “UME: presente y futuro,” *Revista Ejército* no. 857 (September 2012): 40.

Table 1. Spanish National Security Risks and Threats Evolution

	Strategic Defense Review (2003)	Spanish Security Strategy (2011)	National Security Strategy (2013)
General Attack	X		
Armed Conflicts		X	X
Terrorism	X	X	X
Cyber Attacks	X	X	X
African Spanish Territories	X		
Gibraltar	X		
Organized Crime		X	X
Globalization	X		
Economic and Financial Instability		X	X
Energetic vulnerability	X	X	X
Proliferation of Weapons of Mass Destruction	X	X	X
Irregular Immigration	X	X	X
Espionage			X
Disasters and Emergencies	X	X	X
Maritime Vulnerability			X
Critical Facilities and Essential Services' Vulnerabilities			X

*Source:* Created by author by comparing risks and threats in Ministerio de Defensa, *Revisión Estratégica de la Defensa* (Madrid: Ministerio de Defensa, 2003), 49-51; Spanish Government, *Estrategia Española de Seguridad* (Madrid: Spanish Government, 2011), 41-80; Departamento de Seguridad Nacional de la Presidencia del Gobierno, *Estrategia de Seguridad Nacional* (Madrid: Departamento de Seguridad Nacional de la Presidencia del Gobierno, 2013), 21-37.

This new individualistic approach has its primary roots in 1985 with the Spanish Congress approval of Law 2/1985 on civil protection.<sup>8</sup> It states the obligation of any public authorities to safeguard human life under the scope of the law, as the first and foremost of all fundamental rights and provides the procedure to employ human and material resources

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<sup>8</sup> Civil protection is a public service which is aimed at the study and prevention of situations of serious collective risk, extraordinary catastrophe or public disaster which can pose a threat, on a mass scale, to the lives and physical integrity of people and to the very protection of the latter and their property, in the cases in which said situations occur. Ministerio del Interior, NIPO126-08-084-4, *La Dirección General de Protección Civil y Emergencias* (Madrid: Catálogo General de Publicaciones Oficiales, 2008), accessed 8 October 2014, <http://www.proteccioncivil.org/en/mision-y-vision>.

belonging to all public administrations (central, regional, and local), as well as those coming from public-private partnerships, and even from individuals.<sup>9</sup> In doing so, any public authority has developed tools to meet these social commitments depending on its responsibilities. At the national level, this law led to the inclusion of the Spanish Armed Forces in the civil protection system.<sup>10</sup> Between 1985 and 2006, Spain did not have a robust operational civil protection unit at the national level. However, like other countries, it sidestepped this deficiency by using military forces, not specifically trained, equipped, or organized, in support of emergency management.<sup>11</sup>

A recent example occurred in 2002-2003. The oil tanker *Prestige* sank 130 nautical miles from the northwest coast of Spain causing an environmental disaster. All three services, army, navy, and air force, participated to reduce the impact of the twenty million gallon plus oil spill off northern Spanish shores, mainly in Galicia.<sup>12</sup> Seven thousand members of the armed forces, fifteen warships, twenty aircraft, seven helicopters, and dozens of vehicles, deployed along 620 miles of affected coast, not only to remove distillate oil “*chapapote*” but also to monitor the evolution of the spill.<sup>13</sup> Another case happened in 2005-2006, in response to a Pakistani official request to the North Atlantic Treaty Organization concerning the aftermath of a 7.5 magnitude earthquake in the region of Kashmir. With a result of 73,000 deaths, 69,000 injured, and more

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<sup>9</sup> Spanish Congress, Ley Orgánica 2/1985, 21 January, Protección Civil, *Boletín Oficial del Estado* no. 22 (Madrid: Spanish Congress, 25 January 1985), 2092.

<sup>10</sup> Ibid.

<sup>11</sup> Roldán, “De la Brigada de Artillería Volante a la Unidad Militar de emergencias,” 80.

<sup>12</sup> Fernando González Laxe, “Análisis de las consecuencias económicas y sociales de los desastres marítimos: el caso del Prestige,” Instituto Universitario de Estudios Marítimos, Universidad de La Coruña, 2 December 2004, accessed October 8, 2014, <http://www.udc.gal/iuem/documentos/monografias/analisisPrestige.pdf>.

<sup>13</sup> Victor Hernández Martínez, “Las Fuerzas Armadas se despliegan en Galicia,” *La Revista Española de la Defensa* no. 178 (December 2002): 6-15.

than three million homeless people, Spain deployed an ad hoc unit under the North Atlantic Treaty Organization's Response Force -5 mandate.<sup>14</sup> The Pakistan earthquake relief operation involved, among others, a Spanish unit of 370 soldiers, mainly coming from the Engineers Corps. The Engineers facilitated humanitarian relief distribution, improved the road network, built temporary shelters, supported the Pakistani medical system on site, and prepared devastated zones for the winter.<sup>15</sup>

In 2005, several natural disasters occurred in Spain. The largest one was in the province of Guadalajara, where a wildfire killed eleven firefighters and burned 31,814 acres.<sup>16</sup> This dramatic event finally forced the government of Spain to create a new intervention unit to support and provide emergency services as a national tool within the civil protection system. Controversy arose, however, when the government made the decision to create a military organization, with active duty personnel, structure, procedures, and means, instead of a civil one to fill the national level void. Wild and urban fires, floods, earthquakes, hazardous material (HAZMAT) accidents, and heavy snowstorms became the peculiar scenario for this new unit instead of the traditional enemy-oriented one. The name chosen was *Unidad Militar de Emergencias* (UME).

From the beginning, two different opinions emerged. One group, the pro-UME commentators, supported the governmental decision arguing for a military character with its

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<sup>14</sup> Enrique Vega Fernández, "La intervención de las Fuerzas Armadas en apoyo a catástrofes: Operaciones multinacionales de socorro en emergencias," *Documentos de seguridad y defensa* no. 20 (October 2008): 32-33.

<sup>15</sup> Ibid.

<sup>16</sup> Ministerio de Justicia, Judgment 00087/2012 of Audiencia Provincial de Guadalajara" (Guadalajara: Ministerio de Justicia, 9 July 2012), 5-6.

principles of unity, discipline, and hierarchy.<sup>17</sup> Additionally, they used other successful experiences from other nations, such as the United States of America and France, to advocate for a similar structure in Spain.<sup>18</sup> The other group highlighted the disconnection between the new tasks assigned and the military essence. Enrique Silvela Díaz-Criado stated, “The essence of the military profession is the permanent preparation and effective and legitimate use of coercion and, if necessary, lethal force to achieve success in the assigned mission, victory in the confrontation, as a public service for the national security.”<sup>19</sup> Moreover he also pointed out about any military unit, “It is not about avoiding death nor mitigating harm like firefighters do, is about causing positively harm for the sake of the mission.”<sup>20</sup> Accordingly, the new unit should not be military. Nevertheless, the 2009 Armed Forces Royal Ordinances, which provides the ethical code for all military personnel, stipulates that operations in support of citizens’ security and their welfare, and therefore encompasses the new dimension of the military essence.<sup>21</sup>

In 2014, eight years after the foundation, the UME achieved full mission capability. It is time to consider whether the UME has appropriate capabilities to cope with major disasters and if

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<sup>17</sup> Unidad Militar de Emergencias, “I curso de gestión de catástrofes (fase a distancia): módulo MF0 fundamentos sobre emergencias y catástrofes” (Torrejón de Ardoz: Unidad Militar de Emergencias, October 2013), 23.

<sup>18</sup> Roldán, “UME: presente y futuro,” 41.

<sup>19</sup> Enrique Silvela Díaz-Criado, “La Fuerza Letal: esencia de la profesión militar,” *Revista Ejército* no. 870 (October 2013): 92.

<sup>20</sup> *Ibid.*, 92.

<sup>21</sup> Through six articles (98-103), it provides a brief explanation about safety and welfare of citizens, fast reaction, impact on the image of the armed forces, competence, coordinated intervention with other institutions and groups, and support for security forces. Spanish Congress, Real Decreto 96/2009, 6 February, Reales Ordenanzas para las Fuerzas Armadas, *Boletín Oficial del Estado* no. 33 (Madrid: Spanish Congress, 7 February 2009), 13024.

it adds value within the Spanish civil protection system.<sup>22</sup> In doing so, three recent major disasters experienced in the United States of America will serve to compare what a civilian emergency management authority requires from a military organization. From this, a determination can be made whether UME is meeting this pattern in Spain with the necessary caution when comparing two different systems.

## **Part 1. UME**

### **The Spanish National Civil Protection System**

The ideas of the French Revolution that arrived in Spain during the Peninsula War (1808-1814) influenced the Spanish posture toward the protection of citizens.<sup>23</sup> These ideas brought the suppression of the old structure of social assistance based on the actions of the guilds and its replacement by a public service.<sup>24</sup> However, it was not until 1935 that Spain adopted a specific national legislation for the protection of the population, called Passive Defense. The consequence of air strikes on urban areas during European wartime experiences framed the government's desire to minimize human suffering by applying not only a military-based structure but also supported with local civilian organizations. At the end of the Spanish Civil War in 1939, Passive Defense expanded its domains to other hazards such as fires or peacetime disasters, and became the origins of the General Directorate of Civil Protection in 1960.<sup>25</sup>

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<sup>22</sup> Roldán, "UME: presente y futuro," 43.

<sup>23</sup> Fernando Talavera Esteso, "El sistema nacional de protección civil," *Cuadernos de Estrategia no 165* (Madrid: IEEE, Ministerio de Defensa, January 2014): 30.

<sup>24</sup> Gaspar Ariño Ortiz, "Sobre el significado actual de la noción de servicio público y su régimen jurídico," in *El nuevo servicio público*, ed. Marcial Pons (Madrid, 1997): 18.

<sup>25</sup> Talavera, 34.



In 1978, the post-Francoist Spanish Constitution portrayed Spain as a decentralized country with a new political structure by creating an intermediate regional level to existing central and local ones.<sup>26</sup> In the realm of civil protection, the Constitution established the preponderance of power with the local and regional levels of emergency management. The central government provides a supporting role, except in national level disasters. Law 2/1985, the basis of the national civil protection system states, states in article 1, “The permanent action of public authorities on civil protection will focus on the study and prevention of situations of serious risk, catastrophe or public calamity, and relief and protection of persons and property in cases where such situations occur.”<sup>27</sup> Article 2 requires the support of the armed forces when requested by competent authorities.<sup>28</sup> This special requesting procedure is coordinated through the Civil Protection Directorate.<sup>29</sup> In brief, Law 2/1985 established the supporting role of the armed forces inside the civil protection system.

The system operates through four levels of response. First, at the individual or society level, since daily self-protection measures do not require the activation of a contingency plan. Second, at the local level (town, city, county, or province), which requires contingency plans and means within their own jurisdictions.<sup>30</sup> Third, at the regional level, which requires the assumption

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<sup>26</sup> Ibid., 31.

<sup>27</sup> Spanish Congress, Ley Orgánica 2/1985, 2092.

<sup>28</sup> Talavera, 31.

<sup>29</sup> According to the Civil Protection Directorate, the system seeks “to inform and prepare citizens through self-protection, establish an organization bringing together all public and private entities for the rescue of persons and property, in cases of calamities or disasters, and to intervene in a coordinated and effectively in situations of serious risk, catastrophe, or public calamity.” Ministerio del Interior, NIPO126-08-084-4, 6.

<sup>30</sup> In 2012, Spain had 8,116 municipalities, 376 counties, and 50 provinces.

of responsibility for oversight and direction when the local level is overwhelmed or there is a greater need to coordinate region wide response. Finally, at the national level, when the extreme severity of the emergency, also called national interest emergency, requires the Spanish government to lead and manage the situation.<sup>31</sup> This well-developed national civil protection system significantly reduced deaths due to natural or manmade disasters, from ninety-one in 2000 to thirty-five in 2012.<sup>32</sup>

National Defense Law 5/2005 formally introduced the Spanish armed forces into the national civil protection system through the assignment of a new military mission: to preserve the safety and welfare of citizens in cases of serious risk, catastrophe, calamity, or other public needs, as established in the legislation.<sup>33</sup> The great difference from earlier approaches was the requirement to maintain a permanent specific structure, organized, and trained with necessary capabilities and means able to deal rapidly with emergencies at all levels. Among other entities, like firefighters, medical emergency units, local and national police, or civil protection volunteers, the UME became an active participant in the system with the support of the rest of the armed forces and other civilian organizations, if needed.

### Historical Roots

The decision to create and maintain military units specialized in minimizing human suffering is not a twenty-first century invention. In Spain, between 1796 and 1803, Manuel

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<sup>31</sup> Spanish Congress, Real Decreto 407/1992, 24 April, Norma Básica de Protección Civil, *Boletín Oficial del Estado* no. 105 (Madrid: Spanish Congress, 1 May 1992), 14868-14870.

<sup>32</sup> Talavera, 20-23.

<sup>33</sup> Spanish Congress, Ley Orgánica 5/2005, 17 November, Defensa Nacional, *Boletín Oficial del Estado* no. 278 (Madrid: Spanish Congress, 18 November 2005), 37721.

Godoy, Charles IV prime minister, organized the *Brigada de Artillería Volante* within the *Real Cuerpo de Guardias de Corps*. One of its main tasks was to provide relief in events of public distress, especially in firefighting, and dealing with the riskiest and most dangerous activities.<sup>34</sup> In France, in 1811, Napoleon decided to organize and professionalize a firefighter corps in Paris with a military body, the *Bataillon de Sapeurs-Pompiers de Paris*.<sup>35</sup> France was also the forerunner of the permanent designation of other specialized military units within the *Sécurité Civile*. Between 1974 and 1988, the French Minister of Defense founded three army engineer battalions called *Unités d'instruction et d'intervention de la Sécurité Civile* numbers 1, 5, and 7.<sup>36</sup> These units' main tasks dealt with different natural (wildfires, earthquakes, etc.), technological, accidental threats and hazards (biological, radiological, chemical contamination, etc.), performing Search and Rescue (SAR) operations, and logistic support within the disaster area.<sup>37</sup>

Like other countries and parallel to France, the United States of America followed a historical process to promulgate legislation to minimize the consequences of natural or manmade disasters. Although the roots of the federal response and recovery operations can trace its beginnings to the Congressional Act of 1803, it was not until 1979 when the Federal government decided to create a special emergency management agency.<sup>38</sup> Massive disasters in the 1960s and

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<sup>34</sup> José Emilio Roldán Pascual, "España ante las emergencias y catástrofes. Las Fuerzas Armadas en colaboración con las autoridades civiles," *Cuadernos de Estrategia* no. 165 (January 2014): 9-10.

<sup>35</sup> Brigade de sapeurs-pompiers de Paris, "L'histoire," accessed 8 December 2014, <http://www.pompiersparis.fr/la-brigade/l-histoire>. In 1967, the French government upgraded this unit to a full brigade.

<sup>36</sup> Ministère de la Défense, "Armée de Terre," 14 May 2013, accessed 2 October 2014, <http://www.defense.gouv.fr/terre/presentation/organisation-des-forces/genie>.

<sup>37</sup> Ibid.

<sup>38</sup> This act, generally considered the first piece of US disaster legislation, provided assistance to Portsmouth, New Hampshire, following a great fire. US Department of Homeland

early 1970s and the large number of independent federal agencies across the realm of emergencies (more than 100), forced the National Governor's Association to request President Jimmy Carter to centralize federal emergency functions, in order to receive more efficient federal support.<sup>39</sup> President Carter's 1979 Executive Order 12127 marked the birth of the US Federal Emergency Management Agency (FEMA).<sup>40</sup>

The US approach to domestic natural disasters has always considered the armed forces from the very foundation of the nation. As stated by Mr. James Stuhltrager, deputy staff judge advocate for the Pennsylvania National Guard in 2006, "For the past one hundred years, the National Guard of each of the states and territories has been at the vanguard of any response to a natural disaster."<sup>41</sup> Although the United States of America did not develop military units with specialized civilian capabilities to deal with natural or manmade disasters, it created the necessary legislation to ensure readiness and commitment of military units in support of civil authorities. Among others, in 1988, and in order to clarify cost-sharing requirements for public assistance programs, the US Congress approved the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended).<sup>42</sup> According to Thomas J. Langowski, "This

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Security, *FEMA history*, Federal Emergency Management Agency, accessed 19 February 2015, <https://training.fema.gov/history.aspx>

<sup>39</sup> Ibid.

<sup>40</sup> Ibid. The five main assigned tasks assigned to FEMA in any emergency are to foster the state and local capabilities, to coordinate federal relief disaster response, to provide direct assistance, to grant financial assistance to main stakeholders, and to lead hazard mitigation.

<sup>41</sup> James Stuhltrager, "Send in the Guard: The National Guard Response to Natural Disasters", *Natural Resources and Environment* 20 no 4 (Spring 2006): 21-26.

<sup>42</sup> US Department of Homeland Security. Federal Emergency Management Agency. *Unit Three: Overview of Federal Disaster Assistance*, accessed 19 February 2015. [http://www.training.fema.gov/emiweb/downloads/is7unit\\_3.pdf](http://www.training.fema.gov/emiweb/downloads/is7unit_3.pdf)

act is the cornerstone authority for how and when local and state authorities can request federal assistance in an emergency.”<sup>43</sup> Thus, when the Spanish government decided to create the UME foreign experiences such as the French military approach to civil protection or the role of the military in disaster response in the United States of America provided good examples to follow.<sup>44</sup>

### Foundation

Domestic natural and manmade major disasters, forced the government of Spain in 2006 to search for options to create technically specialized and highly qualified emergency services to meet citizens’ demands.<sup>45</sup> At the national level, there was a lack of a robust and agile organizational capacity capable of managing a national level disaster or able to support and reinforce the regional administrations. The government considered two options: one, assign these tasks to the Armed Forces founding a new specialized unit; or, two, to invest in a new civilian permanent organization.<sup>46</sup> The government chose the first option due to the National Defense Directive 1/2004: “The armed forces should collaborate in the national civil protection system and, along with other state institutions, and help to preserve the safety and welfare of citizens.”<sup>47</sup> Moreover, this option allowed the government to leverage special military features such as capacity and speed of response, mass employment, sustained effort, flexibility in their

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<sup>43</sup> Thomas J Langowski, “Defense Support to Civil Authorities,” (Monograph, School of Advanced Military Studies, US Army Command and General Staff College, May 2008), 20.

<sup>44</sup> José Francisco Ruiz Arnal, “La creación de la Unidad Militar de Emergencias: un reto nuevo y apasionante,” *Trébol* no. 41 (2008): 8.

<sup>45</sup> Roldán, “UME: Presente y futuro,” 42.

<sup>46</sup> Ibid.

<sup>47</sup> Ministerio de Defensa, *Directiva de Defensa Nacional 1/2004* (Madrid: Ministerio de Defensa, December 2004), 9.

deployments, and the ability to provide command and control (C2) for additional armed forces reinforcements.<sup>48</sup> On October 7, 2005, the Council of Ministers agreed to establish UME with the mission of “intervention anywhere in Spain under the decision of the Primer Minister, or any Minister appointed by him, to contribute to the safety and welfare of citizens in cases of serious risk, catastrophe, calamity, or other public needs.”<sup>49</sup> As a consequence, Royal Decree 416/2006 established the organization of the UME and its deployment throughout Spain.

Within the establishing legal regulations, two stand out for their impact on the ability to employ UME. First, Defense Order 1766/2007, later modified by Defense Order 896/2013, set up the UME framework within the Ministry of Defense and its internal organization and functioning. Second, Royal Decree 1097/2011, directed operational employment within the civil protection system. This body of laws and regulations ensured the commitment of the Spanish Congress and government with UME, and therefore with the insertion of a specialized military unit in the civil realm of natural and manmade disasters.

### Organization

The UME evolved during its eight years to add capabilities to the national civil protection system, while incorporating military features such as unity, discipline, and hierarchy, as well as logistic, operative, and C2 specialized means.<sup>50</sup> UME is a joint force of 4,000 personnel, mainly coming from the Army. Its organization is composed of a division joint headquarters with its support unit, five intervention battalions, a signal battalion, and an emergency intervention

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<sup>48</sup> Roldán, “UME: Presente y futuro,” 43.

<sup>49</sup> Ministerio de la Presidencia, Resolution 19 January 2006, de la Subsecretaría, por la que se da publicidad al Acuerdo de Consejo de Ministros por el que se crea la Unidad Militar de Emergencias (UME), *Boletín Oficial del Estado* no. 17 (Madrid: Ministerio de la Presidencia, 20 January 2006), 2593.

<sup>50</sup> Roldán, “De la Brigada de Artillería Volante a la Unidad Militar de emergencias,” 84.

regiment which includes an emergency support battalion and technological and environmental emergency battalion. In addition, the UME commander has Operational Control of 43rd Air Force Group with seventeen amphibious firefighting aircraft and an emergency helicopter battalion with eight aircraft (see figure 1). In order to arrive at any emergency in no more than four hours, the UME stations units at five different bases on the peninsula and two more in the Canary Islands (see figure 1).<sup>51</sup> Each intervention battalion has assigned an area of operations where they are responsible for ensuring coordination with regional and local emergency agencies and civil protection units as first responders (see figure 1).

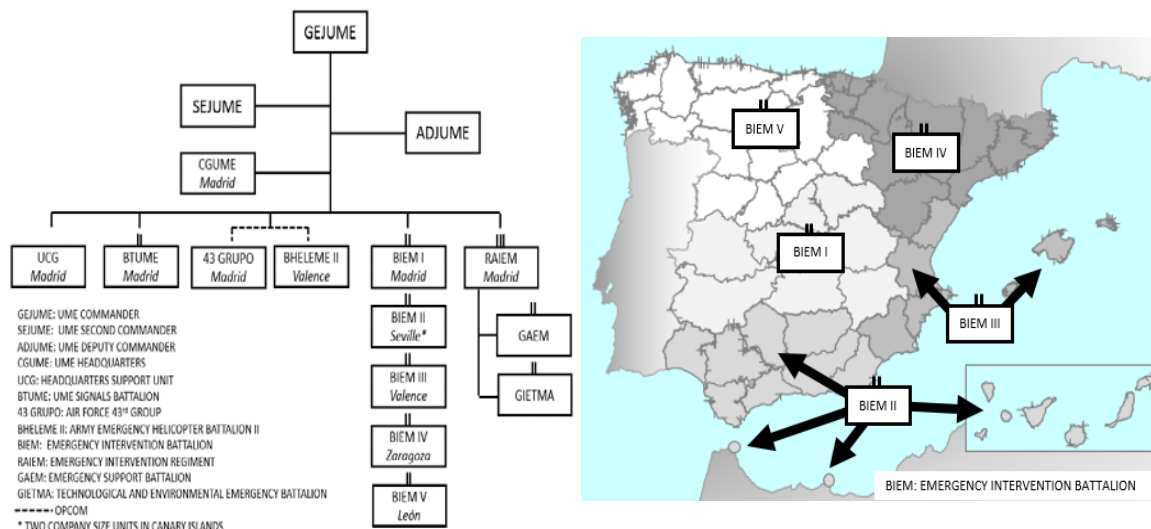


Figure 1. UME Organization Chart and Areas of Responsibility

Source: Created by author using information from Unidad Militar de Emergencias, “Organizacion,” Ministerio de Defensa de Espana, accessed 15 March 2015, [http://www.ume.mde.es/LA\\_UME\\_POR\\_DENTRO/organizacion/](http://www.ume.mde.es/LA_UME_POR_DENTRO/organizacion/).

<sup>51</sup> José Luis Guerrero Jiménez, “La Unidad Militar de Emergencias” *Cuadernos de Estrategia* no. 165 (January 2014): 155.

### Capabilities

The seven UME general military capabilities are: C2; intervention in emergencies originating from natural hazards; those provoked by forest fires; those derived from HAZMAT risks (nuclear, radiological, and chemical); those caused by terrorist attacks or illegal and violent acts; emergencies caused by environmental pollution; and in support of affected civilians during a disaster.<sup>52</sup> In doing so, the different UME special capabilities can be framed under three general domains: C2, direct intervention, and support to affected population and to the emergency units.

#### C2.

This capability allows planning, direction, and control of all UME interventions. It enables warning systems integration and fluent contact with other relevant agencies involved in the civil protection operation, using an advanced Communication Information System. It allows the UME to ensure interoperability with other national organizations and security forces, regional governments, local authorities, and both public and private institutions that are responsible for critical infrastructure.<sup>53</sup> The UME headquarters organization permits different configurations in accordance with the situation. The UME can conduct a national level emergency, and if needed, operate other Emergency Operation Centers in support of other emergencies.<sup>54</sup>

#### Direct intervention.

Wildfire Fighting: This capability allows the UME to address the most common of Spain's natural disasters. Through wildfire fighting capability UME protects both safety and

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<sup>52</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2014* (Torrejón de Ardoz: Unidad Militar de Emergencias, 2014), 4.

<sup>53</sup> Ibid., 26-27.

<sup>54</sup> Roldán, "UME: Presente y futuro," 51.



welfare of the citizens and the heritage of Spanish forests.<sup>55</sup> UME operates specialized ground firefighting trucks as well as amphibious firefighting aircraft and helicopters.<sup>56</sup>

**SAR Operations:** The UME can conduct four different kinds of SAR operations. One, aerial inserted rescues with specialized helicopters and trained crews. Two, waterborne rescues using small boats, water rescuers, and scuba divers. Three, urban rescues as certified by the United Nations Search and Rescue-Medium. Four, wilderness rescues for avalanches, landslides, and caves. Any SAR operations may have the support of rescue-dog teams.<sup>57</sup>

**Engineers Support:** The UME operates five engineer companies capable of removing debris, damage assessment, temporary bridging, underwater activities, and building repair.<sup>58</sup>

**HAZMAT Operations:** A specialized battalion deals specifically with nuclear, biological, and chemical threats, as well as environmental pollution.<sup>59</sup>

**Law and order enforcement:** With five platoons and two squads. It is primary focused in UME affairs and to facilitate its performance within the emergency.

**Support to Affected Population and to the Emergency Units.**

In this category, UME provides limited logistic support to other governmental and non-governmental organizations. This includes temporary camps with sanitation, kitchens, electrical generators, toilets, meals, and other basic needs to the displaced population. Finally, UME provides only limited ground transportation capability, and limited medical treatment.

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<sup>55</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2014*, 28.

<sup>56</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2012* (Torrejón de Ardoz: Unidad Militar de Emergencias, 2012), 15.

<sup>57</sup> *Ibid.*, 35-38.

<sup>58</sup> *Ibid.*, 37.

<sup>59</sup> *Ibid.*, 32.

### Interventions

In national emergencies, the UME commander becomes the on scene commander, not only of the military forces but also of other stakeholders present at the disaster.<sup>60</sup> In other cases, the Primer Minister, through the Minister of Interior, approves official UME intervention requests from autonomous regions/cities, any other minister, or public institution.<sup>61</sup> Since its foundation, wildfires represent the vast majority of the UME interventions with 77.9 percent of the total, followed by floods, rescues, and earthquakes with 11.4 percent and snowstorms with 7.1 percent. Up to September 22, 2014, UME performed 271 missions, all of them but one inside Spain (see table 2). Historical records show that summer, from July to October, mostly concentrates UME operational effort (UME members per day of emergency) (see figure 2). July 2, 2012 became the UME record effort with 1,392 soldiers deployed simultaneously to four huge wildfires (Cortes de Pallas, Andilla, Calasparra, and Valpalmas).

Table 2. UME Interventions to September 22, 2014

	2007	2008	2009	2010	2011	2012	2013	2014	Total	%
Wildfires	4	5	34	14	46	59	33	16	211	77.9
Floods, Rescues, and Earthquakes	2	4	5	7	3	2	6	2	31	11.4
Snowstorms	1	1	6	7	1	1	2		19	7.1
Miscellaneous			1	1		3	1	2	8	3
HAZMAT								1	1	0.3
Offshore Op (Haiti)				1					1	0.3
Total	7	10	46	30	50	65	42	20	271	100

*Source:* Created by author using data from Unidad Militar de Emergencias, “Intervenciones UME (2007-2004),” Ministerio de Defensa de Espana, September 2014, accessed 15 March 2015, <http://www.ume.mde.es/Galerias/Descargas/intervenciones/desglosadas/resumen.pdf>.

<sup>60</sup> Roldán, “UME: Presente y futuro,” 47.

<sup>61</sup> Spanish Congress, Real Decreto 1097/2011, 22 July, por el que se aprueba el Protocolo de Intervención de la Unidad Militar de Emergencias, *Boletín Oficial del Estado* no. 178. (Madrid: Spanish Congress, 26 July 2011), 84143.

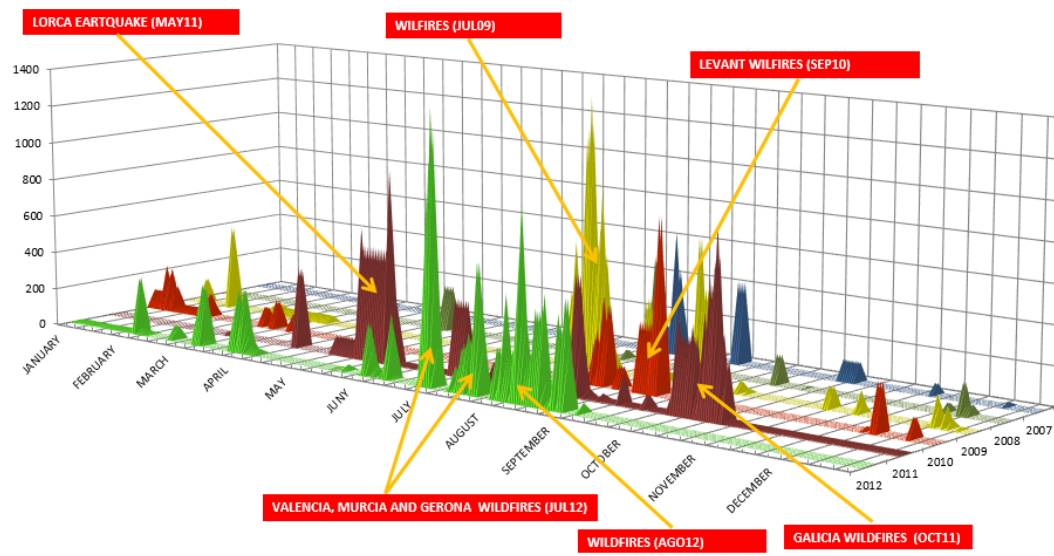


Figure 2. UME Effort Graphic, January 2007-September 2012

*Source:* Created by author using data provided by Unidad Militar de Emergencias, Headquarters G3, Situational Reports provided to author, June 2014.

## Part 2. US Armed Forces' Approach to Major Disasters

### General Framework

For the United States, the first line of military response in domestic disaster relief is the National Guard (State Active Duty under Title 32 United States Code).<sup>62</sup> The state National Guard provides not only military units forming ad hoc joint task forces (JTFs), but also the units to respond to domestic natural disasters and other such emergencies under the authority of the governor.<sup>63</sup> When state-level resources are exhausted, overwhelmed, or nonexistent, the governor

<sup>62</sup> US Department of Defense, GTA 90-01-020, *DSCA Handbook: Tactical Level Commander and Staff Toolkit* (Washington, DC: US Government Printing Office, 30 July 2010), 3-6.

<sup>63</sup> *Ibid.*, 1-1, 1-5; Headquarters, Department of the Army, *Disaster Response Staff Officer's Handbook: Observations, Insights, and Lessons 11-07* (Fort Leavenworth, KS: Center for Army Lessons Learned, December 2010), 18.

can request other interstate mutual aid through the Emergency Management Assistance Compact or federal assistance.<sup>64</sup> In the latter case, after assessing the situation and the official state request for federal support, FEMA recommends, through Department of Homeland Security to the president, the deployment of response teams, and other resources, including active duty armed forces (Title 10 United States Code).<sup>65</sup> Under the Tenth Amendment of the Constitution, each state/territory of the United States has the primary responsibility to prepare for and respond to disasters and emergencies occurring within its borders.<sup>66</sup> Hence, the Federal government always plays a supporting role in domestic crisis management. However, the President remains the authority who can declare a major disaster or emergency declaration and order the activation of federal resources (funding, agencies, and personnel) through FEMA in accordance with Stafford Act. This Disaster Relief and Emergency Assistance Act provides the legal authority for the Federal government to provide assistance to states.

Once requested by the state governor, FEMA, as the coordinator of the federal response, can activate the National Response Plan<sup>67</sup>. In doing so, it can recommend the use of federal

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<sup>64</sup> According to the Army, “The EMAC is a national mutual aid partnership agreement that allows state-to-state assistance during governor- or federally-declared emergencies.” Headquarters, Department of the Army, *Disaster Response Staff Officer’s Handbook: Observations, Insights, and Lessons 11-07*, 18 and 29.

<sup>65</sup> The authority over and control of DOD US Code Title 10 Armed Forces (Army, Navy, Air Force, Marine Corps, and Coast Guard) are at the discretion of the President of the United States as the Commander in Chief. Title 10 refers to the source of funding and the scope of duties of designated units. US Department of Defense, GTA 90-01-020, 1-5.

<sup>66</sup> The United States Constitution Tenth Amendment states, “The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people.” That means what is not specifically federal, belongs to the state. Since the Constitution does not address a federal role for emergency response (except invasion), those responses belong to the states. U.S. Constitution, amend. 10 *Powers of the States and People*. Ratified 15 December 1791.

<sup>67</sup> The National Response Plan is the “federal government’s plan to coordinate its resources and capabilities across agencies and integrate them with other levels of government, as

military assets (the four services and National Guard under Title 10) for disaster relief.<sup>68</sup> Then, with Secretary of Defense approval, the Department of Defense (DOD) may provide support to a disaster area throughout Defense Support of Civil Authorities within the National Incident Management System.<sup>69</sup> US Northern Command (USNORTHCOM) and the US Pacific Command (USPACOM), in their areas of responsibilities, validate suitable Request for Assistance and Mission Assignment, and coordinate the federal military response.<sup>70</sup> Within FEMA's fifteen Emergency Support Functions, the DOD is the Primary Agency for SAR, and Coordinator and Primary Agency for Public Works and Engineering with the US Army Corps of Engineers.<sup>71</sup> However, an important legal restriction frames the employment of Title 10 forces within a

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well as private sector organizations, for prevention of, preparedness for, response to, and recovery from natural disasters, terrorism, or other emergencies.” US Government Accountability Office, , GAO-06-643, *Hurricane Katrina: Better Plans and Exercise needed to Guide the Military's Response to Catastrophic Natural Disasters* (Washington, DC: US Government Printing Office, May 2006), 9.

<sup>68</sup> The US Coast Guard uses Title 14 and 33, and the US Army Corps of Engineers Title 33. US Department of Defense, GTA 90-01-020, 2-14, 3-11, 3-19.

<sup>69</sup> DSCA is the “support provided by US Federal military forces, Department of Defense civilians, Department of Defense contract personnel, Department of Defense Component assets, and National Guard forces (when the Secretary of Defense, in coordination with the governors of the affected states, elects and request to use those forces in title 32, United States Code, status) in response to request for assistance from civil authorities for domestic emergencies, law enforcement support, and other domestic activities, or from qualifying entities for special events.” Headquarters, Department of the Army, Army Doctrine Publication 3-28, *Defense Support of Civil Authorities* (Washington, DC: US Government Printing Office, 26 July 2012), iv.

<sup>70</sup> Ibid., 3-11, 3-12. Federal military forces mean National Guard in Title 10 duty status, regular Armed Forces, and Reserve.

<sup>71</sup> US Department of Homeland Security, *Emergency Support Function Annexes Introduction*, Federal Emergency Management Agency, January 2008, accessed 23 October 2014, [http://www.fema.gov/media-library-data/20130726-1825-25045-0604/emergency\\_support\\_function\\_annexes\\_introduction\\_2008\\_.pdf](http://www.fema.gov/media-library-data/20130726-1825-25045-0604/emergency_support_function_annexes_introduction_2008_.pdf).

domestic disaster: the Posse Comitatus Act.<sup>72</sup> This Act prohibits the use of Federal military forces for any direct civil law enforcement activities unless Congress provides a legal exception.<sup>73</sup> The DOD has a military procedures to respond rapidly and efficiently to official requests if needed.

In order to identify military capabilities, patterns of performance in major recent U.S. disasters, three case studies will be presented: Hurricane Andrew (1992), Hurricane Katrina (2005), and Hurricane Sandy (2012).

#### Case Study 1: Hurricane Andrew (1992)

On August 24, 1992, Hurricane Andrew devastated the south coast of Florida, especially Palm Beach, Broward, Collier, Monroe, and Dade Counties.<sup>74</sup> With sixty people killed, thirty-three billion dollars in damages, 79,663 homes damaged or destroyed, twenty million cubic yards of debris, and more than 250,000 evacuated persons, Andrew remains the third most powerful hurricane to hit the United States in the twentieth century.<sup>75</sup> Before the disaster, state and federal agencies initiated the Federal Response Plan.<sup>76</sup> The governor of Florida activated 1,500 National

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<sup>72</sup> The Posse Comitatus Act was signed by President Hays on 18 June 1878, and its different interpretations and clarifications state the incompatibility for the Army, Navy, Air Force, and Marine Corps to perform any kind of domestic police law enforcement role. Thomas J. Langowski, "Defense Support to Civil Authorities" (Monograph, School of Advanced Military Studies, US Army Command and General Staff College, Fort Leavenworth, KS, May 2008), 18.

<sup>73</sup> US Department of Defense, GTA 90-01-020, 1-6.

<sup>74</sup> Florida National Guard, *After Action Report: Operation Andrew 23 August-13 November 1992* (State of Florida: Office of the Adjutant General, Department of Military Affairs, 30 March 1993), 1.

<sup>75</sup> US President, *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: The White House, February 2006), 5-9.

<sup>76</sup> According to Kapucu, "Federal Response Plan in 1992 is the predecessor of current National Response Plan implemented in 2004, with the main difference for federal military forces to be more concise in terms of breaking up the roles and responsibilities. NRP intended to take an "all-hazards" – "all-discipline" approach, and be more precise." Naim Kapucu, "The Role of the Military in Disaster Response in the U.S.", accessed 15 March 2015,

Guardsmen to reinforce emergency services.<sup>77</sup> The DOD implemented the Second US Army Military Assistance to Civil Authorities Plan.<sup>78</sup> On August 23, the Second Army deployed the Defense Coordinator Officer and his Emergency Response Team—Advance to the State of Florida Emergency Operation Center and to the Federal Coordinating Officer’s location.

In the early hours of October 24, hurricane Andrew made landfall in Florida with gruesome results.<sup>79</sup> A huge humanitarian problem emerged; destruction, shortages of essential needs, roads blocked, no radio/TV broadcast capability, and health issues depicted the scenario.<sup>80</sup> In addition, criminal activity quickly began to appear. The Damage Assessments Teams, initially conceived to provide the responding headquarters with real time information on the impact of the disaster, failed to provide the Emergency Operations Centers with accurate information.<sup>81</sup> The agencies fell short in providing essential needs. The magnitude of the disaster, and the mishandling of the initial response, forced the governor of Florida, Mr. Lawton Chiles, to request for federal assistance. President George Bush replied with an official disaster declaration.<sup>82</sup>

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[http://www.academia.edu/4164096/The\\_Role\\_of\\_the\\_Military\\_in\\_Disaster\\_Response\\_in\\_the\\_U.S](http://www.academia.edu/4164096/The_Role_of_the_Military_in_Disaster_Response_in_the_U.S)

<sup>77</sup> Florida National Guard, 3.

<sup>78</sup> Dave Wellons, “Doctrine for Domestic Disaster Response Activities” (Monograph, School of Advanced Military Studies, US Army Command and General Staff College, May 2000), 17.

<sup>79</sup> Victoria Sherrow, *Hurricane Andrew: Nature’s Rage* (Springfield, NJ: Enslow Publishers, 1998), 23.

<sup>80</sup> James M. Seydler, “Hurricane Andrew Humanitarian Relief Operations.” (Fort Bliss, TS: US Army Sergeant Major Academy, December 2009), 4.

<sup>81</sup> US Congress, Senate, *Lessons Learned from Hurricane Andrew* (Washington, DC: US Government Printing Office, 1998), 92-94.

<sup>82</sup> Janet McDonnell, *Hurricane Andrew: Historical Report* (Fort Belvoir, VA: Office of History US Army Corps of Engineers, 1993), 2.

The first military unit to react was the Florida National Guard, with 6,266 guardsmen (70 percent of the total strength), to prevent looting and to perform search and rescue operations.<sup>83</sup> During the first ten days, the Florida National Guard provided medical treatment and evacuation, damage assessment, aviation support, road clearing and debris removal, transportation and distribution of commodities, sheltering, and providing linguists (see table 3).<sup>84</sup> Four days later, Bush authorized the reinforcement of state capabilities by forming JTF Andrew.<sup>85</sup>

The JTF Andrew mission was, “Provide humanitarian support by establishing field feeding sites, storage/distribution warehousing, cargo transfer operations, local/line transportation operations, and other logistical support to the local population.”<sup>86</sup> The DOD provided logistical, medical, and engineering support. As examples, 1,014 US Air Force sorties flown, 850,000 meals served, one million Meals Ready to Eat delivered, and 80,000 tons of humanitarian supplies moved into the area by sea and land. Moreover, 67,000 civilian medical patients treated, a thousand tents erected, mobile radio station established, four victim Life Support Centers established, supporting 2,400 people/day, six million cubic yards of debris removed, and ninety-eight schools repaired (see table 3).<sup>87</sup> The South Atlantic and the Jacksonville District of the US

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<sup>83</sup> US Department of the Army, *Domestic Support Operations FM 100-19* (Washington, DC: US Government Printing Office, 1 July 1993), 1.5-9.5, and Unclassified Working Paper, “Hurricane Andrew, 24 August 1992, South Florida, DOD Force Protection Lessons Learned,” 31 August 2005, 2.

<sup>84</sup> Florida National Guard, 3-4.

<sup>85</sup> 24,000 additional active duty soldiers mainly from, Second US Army, the XVIII Airborne Corps with elements of 82nd Airborne Division, 10th Mountain Division, a Special Purpose Marine Air-Ground Task Force, the US Air Force, and US Army Material Command, and Canada. Wellons, 19.

<sup>86</sup> Wellons, 19.

<sup>87</sup> Unclassified Working Paper, 1.



Army Corps of Engineers performed tasks related to plastic roofing, emergency generators and pumps, debris removal, water supply and distribution, temporary housing, school repair, and portable toilets (see table 3).<sup>88</sup> After thirty-one days of operation, with all assigned missions accomplished, JTF Andrew ended the mission.

Table 3. Assigned Main Tasks for Military Units in Hurricane Andrew

	Federal Forces	Florida National Guard
ESF #1 Transportation	Ground and air support	Ground and air support
ESF #2 Communications	Support with C2	Telephone restoration
ESF #3 Public Works and Engineering	Damage assessment	Damage assessment
	Debris removal	Debris removal
	Building repair	Road clearing
ESF #4 Firefighting	-	-
ESF #5 Emergency Management	Liaison teams	-
ESF #6 Mass Care, Emergency Assistance, Temporary Housing, and Human Services	Provide tentage	Provide tentage
	Establish laundry facilities	Provide linguists
	Psychological support	-
ESF #7 Logistics	Operate humanitarian depot system	General support
	General support	
ESF #8 Public Health and Medical Services	Medical treatment	Medical treatment
		Evacuation
ESF # 9 SAR	-	SAR
ESF #10 Oil and Hazardous Material Response	-	-
ESF #11 Agriculture and Natural Resources	Provide food and water	Provide food and water
ESF #12 Energy	Provide electrical power	Power restoration
ESF #13 Public Safety and Security	Area patrol (without ammo)	Law and order enforcement
ESF #14 Long-term Community Recovery	-	-
ESF #15 External Affairs	-	-

*Source:* Created by author using information gathered during research.

<sup>88</sup> US Army Corps of Engineers, “Historical Vignette 055 - The Corps came to the Aid of Florida in the Aftermath of Hurricane Andrew,” August 2002, accessed 26 October 2014, <http://www.usace.army.mil/About/History/HistoricalVignettes/ReliefandRecovery/055HurricaneAndrew.aspx>.

In the aftermath, the Florida National Guard and DOD identified lessons learned for future commitments. On the positive side, Hurricane Andrew hit Florida in the wake of Operation Desert Storm. The military's recent operational employment afforded enough experience and training in stressful situations to cope with Hurricane Andrew. In addition, units demonstrated readiness and capability to establish a reliable C2 system in a devastated area.<sup>89</sup> Additionally, the need to deploy a division headquarters to command and control the whole operation, the crucial role of liaison officers in all level to coordinate actions and avoid duplications, and the importance of routine training and mutual knowledge between different actors. Moreover, the capability to preposition units, the essential need for accurate initial assessment, and the good coordination between National Guard and Active Component units. Finally, they identified the need for self-sustained military units with appropriate telecom assets, the performance of information managing, the critical transportation and logistics capabilities, and the essential conduction at the same time of security and humanitarian missions.<sup>90</sup> The main take-aways were the establishment of reliable C2 and coordination, and the presence of self-sustaining responders, as well as the advantage of units' wartime experience in dealing with crises.

#### Case Study 2: Hurricane Katrina (2005)

On August 29, 2005, Hurricane Katrina hit the southern states of Louisiana and Mississippi, devastating over 93,000 square miles.<sup>91</sup> There was over ninety-six billion dollars in damaged property, 300,000 homes destroyed, more than 118 million cubic yards of debris, nearly

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<sup>89</sup> US Congress, Senate, *Lessons Learned from Hurricane Andrew*, 97.

<sup>90</sup> Florida National Guard identified 209 lessons learned in the Julls Long Report. Florida National Guard, 1-231.

<sup>91</sup> US President, *The Federal Response to Hurrican Katrina: Lessons Learned*, 1.

770,000 displaced or trapped people, and an estimated 1,330 people killed.<sup>92</sup> In addition, the security situation was chaotic. Looting, rapes, and other criminal activities went unchecked due to an under-represented police force.<sup>93</sup> This devastation framed the overall situation in the affected areas.<sup>94</sup> However, before Katrina made landfall from the Gulf of Mexico, the State and Federal governments, were prepared according to contingency plans and expected outcome.<sup>95</sup>

On August 23, USNORTHCOM began monitoring the tropical depression, conducting a preliminary capabilities assessment, and issued orders to Regional Emergency Preparedness Liaison Officers, State Emergency Preparedness Officers, and the Senior Regular Army Advisors National Guard.<sup>96</sup> Three days later, both Louisiana and Mississippi governors activated their proper Emergency Operation Center and the National Guard, deploying 5,982 on state active duty in Louisiana and 3,838 in Mississippi for hurricane preparation activities. On August 26, President Bush issued an emergency declaration for Louisiana, allowing the employment of federal aid.<sup>97</sup> The military operated under the framework of Army doctrine, Field Manual 100-19, *Domestic Support Operations*.<sup>98</sup> Accordingly, the military responded under two different

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<sup>92</sup> Lynn E. Davis, Jill Rough, Gary Cecchine, Agnes Gereben Schaefer, and Laurinda L. Zeman, *Hurricane Katrina Lessons for Army Planning and Operations* (Santa Monica, CA: RAND Corporation, 2007), 2.

<sup>93</sup> James A Wombwell, Occasional Paper 29, *Army Support During the Hurricane Katrina Disaster*, The Long War Series (Fort Leavenworth, KS: US Army Combined Arms Center, Combat Studies Institute Press, 2009), 1.

<sup>94</sup> US President, *The Federal Response to Hurrican Katrina: Lessons Learned*, 5-8.

<sup>95</sup> Davis et al., 15-17.

<sup>96</sup> US President, *The Federal Response to Hurrican Katrina: Lessons Learned*, 22; Davis et al., 16.

<sup>97</sup> Wombwell, 3.

<sup>98</sup> Ibid., 195.

authorities: the National Guard under Title 32, or state-active duty, with a peak mobilization of 50,000, and the Federal military forces under Title 10, with a peak deployment of 22,000 members.<sup>99</sup> To further compound the complexity of command, military forces fragmented into three separate JTFs and a separate Corps of Engineers response. The National Guard established Task Force Pelican in Louisiana and Task Force Cyclone in Mississippi and Federal forces established JTF Katrina under USNORTHCOM. The National Guard JTFs conducted all types of search and rescue operations (in Louisiana mainly in New Orleans and the surrounding parishes), performed law enforcement actions and engineering works (clearing debris, canals, and repairing levees), provided medical assistance, relief aid (mainly food, water, and ice), and C2 (see table 4).<sup>100</sup> Moreover, National Guard Civil Support Teams provided assistance by examining the contents of potentially hazardous containers in close coordination with states' agencies.<sup>101</sup> The magnitude of the disaster forced military units to perform almost any kind of relief effort.<sup>102</sup> On the federal side, JTF Katrina performed different tasks. The first and more urgent task was to perform airborne search-and-rescue operations, as well as providing critical supplies to victims.<sup>103</sup> In addition, JTF Katrina supported emergency management, medical assistance, transportation, and establishing communication networks (see table 4).

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<sup>99</sup> Davis et al., 8-16. JTF Katrina was composed, among others, of the 2nd MEF, helicopter-carrier USS *Bataan*, 1st Air Cavalry Brigade, 82nd Airborne Division, 1st Cavalry Division, or Mississippi Valley Division of the USACE performed DSCA operations. Davis et al., 30-32.

<sup>100</sup> Wombwell, 45-47.

<sup>101</sup> Ibid., 102.

<sup>102</sup> The Department of Defense granted commanders a "blank check" to do whatever was necessary to help the people of Mississippi and Louisiana. Ibid., 183.

<sup>103</sup> Ibid.

The Corps of Engineers, although not under JTF Katrina, first repaired the levees surrounding the city of New Orleans, but they rapidly transitioned to other tasks like delivering of food, water, and ice.<sup>104</sup>

Table 4. Assigned Main Tasks for Military Units in Hurricane Katrina

	Federal Forces	National Guard
ESF #1 Transportation	Air and ground support	Air and ground support
ESF #2 Communications	Communications network	-
ESF #3 Public Works and Engineering	Damage assessment Debris removal Structure repairs (buildings, levees, roads, water issues)	Debris removal Building and levees repairing
ESF #4 Firefighting	-	Fire extinction
ESF #5 Emergency Management	C2 capabilities Liaison officers Airport management	Division headquarters capabilities
ESF #6 Mass Care, Emergency Assistance, Temporary Housing, and Human Services	Mortuary support Water purification	Evacuation assistance Air ambulance Water purification Shelter
ESF #7 Logistics	General support	General support
ESF #8 Public Health and Medical Services	Medical/veterinary support	Medical support
ESF # 9 SAR	SAR	SAR
ESF #10 Oil and Hazardous Material Response	Decontamination	With Civil Support Team
ESF #11 Agriculture and Natural Resources	Food, water, and ice	Food, water, and commodities (points of distribution)
ESF #12 Energy	Emergency power	Fuel distribution
ESF #13 Public Safety and Security	Traffic control Presence patrols	Law enforcement
ESF #14 Log-term Community Recovery	Recover water infrastructure	-
ESF #15 External Affairs	-	-

*Source:* Created by author using information gathered during research.

<sup>104</sup> Ibid., 160, 206.

The military units performed well. The Hurricane Andrew lessons learned reports proved crucial for this operation due to advice mainly in equipment and personnel requirements. Like in Hurricane Andrew, recent combat experience—also in Iraq—proved beneficial. For example the use of sewer, water, energy, academics, trash, medical, cultural, and security criteria for enhancing information awareness in New Orleans.<sup>105</sup> Like in Hurricane Andrew, the speed of the storm rapidly overwhelmed the response. Despite the complexity of the situation, the National Guard reacted immediately to affected areas with all means available and Federal forces to the crisis in a timely manner and with determination and commitment.<sup>106</sup>

After the disaster, DOD identified key lessons. The lack of a formal and defined C2 structure between the National Guard and Federal forces provoked misunderstandings and misuse of limited means.<sup>107</sup> Lack of operational awareness, and of reliable and interoperable communications, did not help the synchronization of efforts.<sup>108</sup> Another lesson identified was the need to increase awareness and preparation for a major disaster, involving civilian authorities, Air National Guard, and commercial airlines to support the deployment to out-of-state emergencies. In addition, the National Guard needed to increase contacts and coordination with FEMA and other organizations to ensure appropriate performance. On the positive side, the National Guard, because it can deputized with power to arrest, played a key role in restoring law and order.<sup>109</sup>

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<sup>105</sup> Wombwell, 145, 196, 213.

<sup>106</sup> Ibid, 45, 213.

<sup>107</sup> Davis et al., xii.

<sup>108</sup> US President, *The Federal Response to Hurricane Katrina: Lessons Learned*, 55.

<sup>109</sup> US Congress, House, *A Failure of Initiative. Final Report of the Select Bipartisan Committee to Investigate the Preparation and Response to Hurricane Katrina* (Washington, DC: US Government Printing Office, February 2006), 251.

### Case Study 3: Hurricane Sandy (2012)

On October 29, 2012, Hurricane Sandy made landfall over the one of the most densely populated regions in the United States of America, mainly in New York and New Jersey. The hurricane caused at least 159 deaths and damaged 650,000 homes.<sup>110</sup> Vital infrastructure, such as power transmission, transportation, and water facilities, similarly suffered the destruction . Although it is still difficult to determine the exact economic cost of the disaster, as of October 6, 2014 the assistance to disaster survivors is estimated at \$1.4 billion. Assistance to state, local, and tribal governments is over \$7 billion. Hazard mitigation grants, to offset the risk of future damage, run to at least \$203.4 million.<sup>111</sup>

The local, state, and federal response began days before the hurricane arrived. Thanks to previous major disasters lessons learned, robust contingency plans were ready. On October 26, USNORTHCOM deployed the Defense Coordinating Officers in support of FEMA to validate, plan and coordinate the DOD response.<sup>112</sup> On October 30, President Barrack Obama, when analyzing Sandy's consequences, decided to declared major disasters for Connecticut, New

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<sup>110</sup> US Department of Housing and Urban Development, *Hurricane Sandy: Rebuilding Strategy* (Washington, DC: US Government Printing Office, 2013), 13.

<sup>111</sup> US Department of Homeland Security, "Sandy Recovery Office," Federal Emergency Management Agency, accessed 30 October 2014, <https://www.fema.gov/sandy-recovery-office>.

<sup>112</sup> US Department of Homeland Security, *Hurricane Sandy: Timeline*, Federal Emergency Management Agency, accessed 15 March 2015, <http://www.fema.gov/hurricane-sandy-timeline>. Defense Coordinating Officer (DCO) is the "Department of Defense single point of contact for domestic emergencies who is assigned to a joint field office to process requirements for military support, forward mission assignments through proper channels to the appropriate military organizations, and assign military liaisons, as appropriate, to activated emergency support functions." US Joint Chiefs of Staff, *Defense Support on Civil Authorities JP 3-28* (Washington, DC: US Government Printing Office, 31 July 2013), GL6.

Jersey and New York, making federal aid available to supplement state and local recovery efforts.<sup>113</sup> On November 3, he extended the declaration to Rhode Island.<sup>114</sup>

The military effort came rapidly from the affected states' National Guards, which deployed 7,400 members to deal with the consequences of Sandy.<sup>115</sup> At first, the general tasks performed focused on support at evacuation shelters, route clearance, SAR, and delivery of essential equipment and supplies. The high-wheeled military equipment allowed guardsmen to evacuate people in flooded areas (see table 5). Moreover, Title 32 status permitted soldiers to support law enforcement wherever needed and National Guard Civil Support Teams to deploy to areas of potential hazardous material crisis.<sup>116</sup> Additionally, DOD provided support to FEMA, tribal, local, and state response efforts with different units to perform requests tasks (see table 5).<sup>117</sup> The DOD offered support at all military installations and provided lift aircrafts to move personnel and cargo to New York.<sup>118</sup> USNORTHCOM established a coordination element in

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<sup>113</sup> US Department of Homeland Security, *Hurricane Sandy: Timeline*.

<sup>114</sup> Ibid.

<sup>115</sup> SFC Jim Greenhill, "National Guard Aids in Hurricane Sandy Response," US Department of Defense, 30 October 2012, accessed 16 October 2014, <http://www.defense.gov/news/newsarticle.aspx?id=1183812012>.

<sup>116</sup> Civil Support Teams are specialized and technological advanced federal founded teams within the National Guard structure that provides the first line of defense against chemical, biological, radiological, and nuclear threats.

<sup>117</sup> The main NORTHCOM units involved were the US Transportation Command, US Army Corps of Engineers, US Fleet Forces (Navy and Marine Corps), Defense Logistics Agency, and Reserve Quartermaster Teams. North American Aerospace Defense Command and US Northern Command Public Affairs, "Hurricane Sandy Response Support-Nov. 7," US Northern Command, 7 November 2012, accessed 31 October 2014, <http://www.northcom.mil/Newsroom/tabid/3104/Article/563649/usnorthcom-hurricane-sandy-response-support-nov-7.aspx>.

<sup>118</sup> North American Aerospace Defense Command and US Northern Command Public Affairs, "Hurricane Sandy Response Support-Nov. 1," US Northern Command, 1 November



Joint Base McGuire/Dix/Lakehurst, New Jersey as a command and control node for all military support activities, three incident support bases, and damage assessment teams with Navy and Marine experts.<sup>119</sup> Additionally, the Defense Logistics Agency provided essential needs such as meals, banquets, fuel, tents, medical items, or water.<sup>120</sup> The main federal ground support came from the US Army Corps of Engineers' North Atlantic Division and mainly the New York District. During the response phase supported the extraction of 475 million gallons of water, provided power with more than 106 generators, conducted debris removal, water provision, and begin repairs to projects.<sup>121</sup> The Army Reserve provided three tactical water distribution units as part of the overall relief effort.<sup>122</sup> Due to previous experiences and robust contingency plans USNORTHCOM reacted effectively.

To ensure unity of command within all military forces involved in an emergency, DOD created Dual Status Commands. A Dual status commander is a designated National Guard or Federal military officer able to command military personnel serving in either a State Active

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2012, accessed 31 October 2014, <http://www.northcom.mil/Newsroom/tabid/3104/Article/563652/usnorthcom-hurricane-sandy-response-support-nov-1.aspx>.

<sup>119</sup> Ibid.

<sup>120</sup> North American Aerospace Defense Command and US Northern Command Public Affairs, "Hurricane Sandy Response Support-Nov. 6," US Northern Command, 7 November 2012, accessed 31 October 2014, <http://www.northcom.mil/Newsroom/tabid/3104/Article/2959/usnorthcom-hurricane-sandy-response-support-nov-6.aspx>

<sup>121</sup> US Army Corps of Engineers, North Atlantic Division. "North Atlantic Division Hurricane Sandy: Response, Recovery, Resilience and Risk Reduction." US Army Corps of Engineers, November 2013, accessed 11 March 2015, <http://www.usace.army.mil/Portals/2/docs/Emergency%20Ops/Hurricane%20Sandy/SandyPresentation.pdf>.

<sup>122</sup> MAJ Angela Wallace, "Army activates Reserve units for Hurricane Sandy relief," US Army, 5 November 2012, accessed 16 October 2014, [http://www.army.mil/article/90644/Army\\_activates\\_Reserve\\_units\\_for\\_Hurricane\\_Sandy\\_relief/](http://www.army.mil/article/90644/Army_activates_Reserve_units_for_Hurricane_Sandy_relief/).

Duty, Title 32, or Title 10 status.<sup>123</sup> This commander serves simultaneously in two statuses, Federal and State, and requires the consent of the governor and approval of the President. This new approach helped to solve the post-Katrina failures to integrate the military response.<sup>124</sup>

Table 5. Assigned Tasks for Military Units in Hurricane Sandy

	Federal Forces	National Guard
ESF #1 Transportation	Strategic air and rotary lift support	Air support
ESF #2 Communications	-	-
ESF #3 Public Works and Engineering	Conduct damage assessment Debris removal Structures repair De-watering pumping	Debris removal -
ESF #4 Firefighting	-	-
ESF #5 Emergency Management	Coordination elements	-
ESF #6 Mass Care, Emergency Assistance, Temporary Housing, and Human Services	DOD facilities available Essential needs delivery	Prepare shelters
ESF #7 Logistics	Provide incident support bases	Basic need commodities support
ESF #8 Public Health and Medical Services	Medical helicopter lift	-
ESF # 9 SAR	Air SAR	Ground SAR
ESF #10 Oil and Hazardous Material Response	-	Civil Support Team
ESF #11 Agriculture and Natural Resources	Provide food and water	Provide food and water
ESF #12 Energy	Electrical generators	Fuel distribution
ESF #13 Public Safety and Security	-	Law enforcement
ESF #14 Long-term Community Recovery	-	-
ESF #15 External Affairs	-	-

Source: Created by author using information gathered during research.

<sup>123</sup> US Department of Defense, GTA 90-01-020, 3-18.

<sup>124</sup> Ludwig J, Schumacher, “Dual Status Command for No-Notice Events: Integrating the Military Response to domestic disasters,” *Homeland Security Affairs* no.7, article 4 (February 2011): 2-4.

U.S. Transportation Command used its wartime experience in Afghanistan to synchronize efficiently the airlifting support to civil authorities. It set a special team to deal with any official requests about delivering military forces, supplies or water, distillation or sanitation capabilities.<sup>125</sup> The lessons learned from previous major disasters like Hurricane Andrew and Katrina permitted a successful military performance. Army Gen. Charles H. Jacoby Jr., commander of USNORTHCOM, stated that one of the lessons identified during the disaster was the importance of preparation with all interagency communities throughout training and exercises.<sup>126</sup> While the pre-positioning of assets added speed to the response, far more important was having the lead time to employ the means.<sup>127</sup> The US Army Corps of Engineers identified the need to improve C2 nodes mainly with training and procedures, foster Reception, Staging, Onward-movement & Integration systems.<sup>128</sup> The military presence, capabilities, and the previous training and coordination with natural disasters stakeholders like FEMA helped to minimize the impact of the hurricane.<sup>129</sup>

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<sup>125</sup> Department of Defense, "From Afghanistan to Sandy, Transcom Synchronizes Support," accessed 28 March 2015, <http://www.defense.gov/news/newsarticle.aspx?id=118463>

<sup>126</sup> Donna Miles, "NORTHCOM, FEMA Build on Hurricane Sandy Response Lessons," US Department of Defense, 24 January 2013, accessed 1 November 2014, <http://www.defense.gov/news/newsarticle.aspx?id=119093>.

<sup>127</sup> Ibid.

<sup>128</sup> COL Paul Owen and LTC John Knight, "Hurricane Sandy Response & Recovery After Action Report (AAR)," US Army Corps of Engineers, 23 May 2013, accessed 12 November 2014, <http://www.nan.usace.army.mil/Portals/37/docs/Recpost/Final%20Super%20Storm%20Sandy%20AAR%20Rollup%2023MAR13.pdf>

<sup>129</sup> As BG James J. Grant said, perhaps the greatest contribution made by the individual Soldiers and Airmen was their compassion for their fellow citizens and the sense of order they brought to every place they deployed. Wayne Woolley, "A storm-and response-unlike any other," *Guardlife* 35, no. 4 (February, 2013): 7.

### Analysis and Conclusions

Using military means to support civilian authorities in disaster management and relief is not a recent duty for the US Armed Forces.<sup>130</sup> Historically, they have participated in other major natural disasters, often complementing and sometimes leading emergency operations. The US military represents a major pillar of the state and federal response effort. Moreover, citizens' growing demand for human security has forced administrations to elevate the commitment of all sources available, including military units, to minimize people's suffering. Despite quotes like Secretary of War Elihu Root in 1899 declaring, "the purpose of the Army was to fight wars and military capabilities have little justification if they cannot be pulled together to fight wars," the twenty-first century US Armed Forces are trained and ready to deal with disasters, both natural and man-made, as well as wars.<sup>131</sup> At present, the primary military contribution within the US homeland is based on the National Guard, and when necessary and officially requested with Federal military forces, in a supporting role, through Defense Support of Civil Authorities.<sup>132</sup>

The three case studies represent the most recent US major disasters where military involvement played a significant role in the resolution of the humanitarian crisis. Hurricanes Andrew, Katrina, and Sandy also portray a military performance evolution of the contribution in emergency relief in the United States. In all three situations, emergency managers and citizens

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<sup>130</sup> Joseph Austin, "Defense Support of Civil Authorities—Are We Organized Right?" (Strategy Research Project, US Army War College, Carlisle Barracks, PA, 30 March 2007), 2.

<sup>131</sup> Paul Hammond, "The Development of National Security in the Executive Branch: Overcoming Disincentives," in *Grand Strategy and the Decision-making Process*, ed. J.C. Gaston (Washington, DC: National Defense University Press, 1992), 3.

<sup>132</sup> If needed DOD may provide immediate support at the municipal, county, or tribal level through the Immediate Response Authority authorizing any commander to react within capabilities in order to save lives, prevent human suffering, or mitigate great property damage. US Department of Defense, GTA 90-01-020, 3-3, 3-4.

felt comforted when soldiers were present, firstly from the National Guard and then from the Federal military forces. Each case study identifies the major tasks performed by these units along the response phase and the main lessons learned. Commitment, training, wartime experience, and unique capabilities allowed military units to accomplish a great number of different tasks as well as to rapid respond to a broad spectrum of emergencies.<sup>133</sup>

In major disasters the civil authorities' request for military support, regardless its origins from the National Guard or from the Federal military forces, portrays a pattern of support or most common requested tasks, which divide into seven categories of capabilities:

## C2.

Units capable of both providing a joint headquarters for the deployed military units (evaluated as division at its highest level), and the capability to support other emergency centers with telecom assets, liaison officers, information, and specialized staff.

## SAR Operations.

Units trained and equipped to conduct air, water, and ground rescues. This capability requires specialized training, sometimes additional to routine wartime preparation, because speed of intervention is essential to save lives mainly in the first stages of the emergency.

## Engineer Support.

Specialized engineer units able to conduct debris and water removal, road clearing, provision of electricity and shelter, building and infrastructure repairs, and damage assessment.

## HAZMAT Operations.

Units with the training, equipment, and experience to deal with the hazardous material consequences of the disaster, to include industrial spillovers, biological, and chemical threats in destroyed facilities.

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<sup>133</sup> Ibid., 1-3.

#### Law Enforcement.

Disasters require, from the very beginning, military units trained and authorized to conduct police functions. The National Guard, under Title 32, and the US Coast Guard, under Title 14, are able to perform law enforcement activities. Conversely, Active Component Title 10 units cannot due to the Posse Comitatus Act, but they can support these activities with traffic regulation or patrolling, among others.

#### Logistic General Support.

Logistic units capable of the distribution of essential commodities with both air (fixed and rotary aircrafts) and ground transportation. Combat units frequently are tasked to deliver food, water, ice, and other basic needs.

#### Medical Support.

Medical units that can conduct emergency and routine care and that also possess, or have access to, air and ground evacuation assets.

Alongside the most common required tasks, table 6 lists the main US Armed Forces (National Guard and Federal military forces) recurrent lessons learned in all three case studies. This table provides extra information about the military requirements to accomplish emergency mission with success, and the ability of involved units to fulfill civil emergency management expectation in ill-defined and complex situations.

Table 6. Main US Armed Forces Lessons Learned  
from Major Disasters Case Studies

#	Lesson Learned
1	Activate Emergency Operation Center//Tactical Operation Center, and project Forward Teams prior and during the disaster
2	Prepositioning assets as soon as possible
3	Importance of routine training with other emergency actors
4	Units must be self-sustained with own communications network
5	Road transportation is often faster than airlift
6	Law enforcement is critical, in the first moments, to avoid criminal activities
7	Improve readiness systems and status confirmation
8	In a major disaster be ready to distribute essential needs and commodities
9	Activate Damage Assessment Teams, as soon as possible
10	Unity of command, especially with different military units
11	In a major disaster the need for Engineer Support is always required
12	Information managing is critical
13	Need to institutionalized organization, roles, and responsibilities
14	Integrate contractors in the plan and operation
15	Be ready to provide information to media hubs and affected population
16	Debris removal and road clearing is critical to the rest of relief activities
17	Create a system to receive support from other actors on site
18	Need for judge advocate support for claims and contingency contracting
19	Joint headquarters is adequate to deal with major disasters
20	Importance of military liaison officers embedded in all levels of command
21	Be prepared for air, water, and ground SAR operations
22	Wartime experience and military character support the emergency resolve
23	Excellent citizen predisposition toward military units

Source: Created by author using information gathered during research.

These three major operations represent a high military commitment in support of civil emergency management in the United States of America. Although each major disaster is different and depicts distinctive levels of military engagement, certain recurring patterns, mainly required tasks and performance, serve as a general guidance for future military operations in the emergency realm. Furthermore, and in addition to the twenty-three military lessons learned, they are helpful tool to validate a non-American military unit's capabilities performing a supporting role in major disaster emergencies. One of these units is the *Unidad Militar de Emergencias*.

### **Part 3. UME Capabilities Versus Case Studies' Conclusions**

#### Introduction

A direct comparative analysis between the performance of US armed forces and the Spanish ones in major disaster is erroneous due to structural and procedural differences. Moreover, the physical magnitude of the presented case studies far exceeds the standard Spanish major disaster. By adjusting the scale of the military requested tasks to UME capabilities, the case studies will provide a great value for the comparison analysis.

The individual states of the United States of America could have decided to create a full civilian operational structure to deal with emergencies. However, the National Guard, along with the support of Federal military forces if needed, became the cornerstone of the response effort. The reason was related with the Governors' capacity to employ discretionary their state National Guard while the majority of the annual budget was proporcioned by federal funds.<sup>134</sup> Eight years ago, Spain decided to raise the armed forces commitment to support civil authoritites in disasters with the fundamental difference of creating a military unit specialized in civil protection at the national level, the UME. The three case studies represent major recent catastrophes in a period of twenty-two years. In each of the three case studies, pattern of military capabilities requirement emerges. However, do those capability requirements match the structure of the UME to serve as the first military responder to emergencies?<sup>135</sup> Does it need the rest of the armed forces? Do

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<sup>134</sup> Timothy J. Lowenberg, "The Role of the National Guard in National Defense and Homeland Security", accessed 30 March 2015  
<http://www.ngaus.org/sites/default/files/pdf/primer%20fin.pdf>

<sup>135</sup> After eight years, UME has consolidated its role within the system and, as stated in the Spanish Joint Chief Of Staff 05/08 Directive, is the first military responder to any emergency and the point of entry of all extra resources coming from the rest of the Armed Forces to fill capability gaps. Unidad Militar de Emergencias, "I curso de gestión de catástrofes (fase a distancia): módulo MF3 Modelos nacionales de gestión de catástrofes" (Torrejón de Ardoz: Unidad Militar de Emergencias, October 2013), 24-25.



UME procedures contemplate American lessons learned? The analysis centers the three general domains of the UME: C2, direct intervention, and support to affected population and to emergency units, and analyze its special capabilities within them. The analysis will note, but not fully explore, those areas that the UME calls upon support from the rest of the armed forces.

## C2

In all case studies, military units should be self-sufficient in C2 capabilities, including its own telecommunications network. Major disasters required a scalable joint headquarters and means to coordinate actions, exchange information, and promote unity of command. UME C2 capabilities allow the commander to plan, direct, control, and monitor the emergency by their integration in civil protection systems, and without depending on external nodes.<sup>136</sup> Three different configurations (permanent, light deployable, and heavy deployable command post) can split the UME joint headquarters according to level of commitment within the emergency.<sup>137</sup> Due to the National Emergency Network and Emergency Management Military Integrated System, UME units are able to exchange information, share a common operational picture, manage and conduct the emergency, monitor incidents, plan, and generate force.<sup>138</sup> The UME is capable of supporting civilian emergency operating centers to ensure appropriate coordination with telecommunications means, specialized personnel, and liaison officers. The UME relies on

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<sup>136</sup> Roldán explains that UME permanent telecoms rely on the infrastructure of the global telecommunications network of the Ministry of Defense. Additionally, UME has a deployable tactical telecommunications network, whose main elements are State Emergency Digital Radio System devices, and satellite communications. Roldán, “UME: Presente y futuro,” 59.

<sup>137</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2014*, 27.

<sup>138</sup> Ibid., 26.

several Situation Centers for provide warning throughout Spain.<sup>139</sup> In each Emergency Intervention Battalion there is a reconnaissance element set to a 15 minutes ready to respond in case of an emergency.<sup>140</sup>

The UME performs an annual national level emergency training that involves all its capabilities, to include units from the rest of the armed forces, and a great variety of civilian actors and units in the emergencies realm.<sup>141</sup> During the last exercise, Luñol 2014, the UME commander led and coordinated groups from the police, the Red Cross, local and regional emergency teams, and other armed forced units.<sup>142</sup> Moreover, the UME fulfills US Armed Forces lessons learned about activating its own self-sustained scalable joint command posts, and projecting Forward Teams, liaison officers, and units prior and during the disaster; performing routine training with other emergency actors; improving readiness systems and status confirmation with the Emergency Management Military Integrated System; unity of command with UME commander in lead in national level emergencies or the regional/local designed one in other cases; and being able to share information with other stakeholders and affected population. In brief, the UME accomplishes the case studies' requirements in C2.

### Direct Intervention

This domain encompasses several sub capabilities: wildfire fighting, SAR operations, engineers support, HAZMAT operations, and law and order enforcement. For the outcome of this

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<sup>139</sup> Roldán, "UME: Presente y futuro," 60-61.

<sup>140</sup> Guerrero, 164.

<sup>141</sup> Ibid, 163.

<sup>142</sup> Unidad Militar de Emergencias, "La UME presenta el ejercicio de emergencia de interés nacional 'Luñol 2014'," Ministerio de Defensa, 21 January 2014, accessed 4 December 2014, [http://www.ume.mde.es/noticias/2014/01/Noticias/2014\\_01\\_21\\_ejerciciolunol.html](http://www.ume.mde.es/noticias/2014/01/Noticias/2014_01_21_ejerciciolunol.html).

research, UME wildfire fighting capability is not relevant to the analysis due to the absence of this topic in all three case studies.

SAR operations have different specialties: airborne, waterborne, underwater activities, urban/speleology, snow/avalanches, and rescue-dog teams. Case studies demonstrate a need for rapid SAR operations during the initial stages of the emergency in order to save lives. UME has all specialties scattered in twelve Urban Search and Rescue platoons with additional eight rescue-dog teams, eight rescue-skiers squads, six scuba-diver squads, eight waterborne lifeguards in each platoon, seventy-two vertical rescue specialists, and two speleology rescue squads.<sup>143</sup> Four helicopters, several boats, and other material complete the endowment of this capability. In brief, the UME has a robust SAR capability, and fulfills case studies requirements.

The case studies show that engineer works are critical for the success in the response phase. In order to allow the emergency relief and support the affected population, the presence of engineer units is mandatory. The UME has five engineer companies. These units are able to remove debris, clear roads, repair buildings, and prepare terrain for a displaced persons camp.<sup>144</sup> Additionally, they provide specialized capabilities such as building temporary bridges, or perform surface and underwater damage assessments.<sup>145</sup> However, depending the magnitude of the disaster the UME could be forced to request for additional engineer support from the Ministry of Defense, mainly from the Army, due its limited assets and dispersion in different bases.

The emergencies chosen for the case studies do not address significant military involvement for HAZMAT operations. With the Civil Support Teams, US military units could deal Chemical, Biological, Radiological, and Nuclear if required. The UME also has the ability to

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<sup>143</sup> Roldan, “UME: Presente y futuro,” 55.

<sup>144</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2014*, 37.

<sup>145</sup> Ibid.

intervene in HAZMAT emergencies with a specialized battalion called *Grupo de Intervención en Emergencias Tecnológicas y Medio Ambientales* (Technological and Environmental Intervention Battalion). The unit can isolate the affected area, then detect and identify the threat, and then decontaminate the affected people and material. The unit can also provide initial treatment and emergency evacuation of victims from a within a Chemical, Biological, Radiological, and Nuclear environment.<sup>146</sup> Instead of this capability, and due to the presence of other military or civilian similar units in Spain, the UME foresees its units employment within a joint effort.

Finally, the case studies show that in any major disaster, criminal activities emerge in the immediate aftermath. Police forces are frequently overwhelmed, under-presented in devastated areas, and its members tend to be victims of the disaster as well. These scenarios demand an available law and order enforcement. Despite the five platoons and two squads of military police and the law enforcement certification of all UME does not have this capability except for internal activities.<sup>147</sup> The UME requires the direct support of other police corps like the *Guardia Civil*, (a militarized national police corps mainly deployed in rural areas) or the National Police Corps (deployed in major cities). In brief, instead of legal capacity, the UME trusts on other police units to provide law and order enforcement.

The UME fulfills SAR, HAZMAT, and engineer support capabilities. However, and according to the magnitude of the disaster, it may request additional support from the rest of the armed forces. Conversely, UME does not offer law enforcement to civilian authorities and only use it for its own benefit. The UME accomplishes lessons learned about activating damage assessment teams in the initial respond phase, employing engineers units among others for debris removal and road clearing to support rest of relief activities, and activating air, water, and ground

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<sup>146</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2014*, 32.

<sup>147</sup> Spanish Congress, Real Decreto 1097/2011, 84144.

Search and Rescue operations as soon as possible. Thus, the UME meets the case studies' requirements in specialized units in direct intervention but law enforcement capability only circumscribed for own benefit.

### Support to Affected Population and to Emergency Units

Every major disaster, to a greater or lesser extent, affects the civilian population. Along the three case studies, the need for logistic and medical support framed the biggest part of the military's contribution to the overall relief effort. The tasks associated are air and ground transportation of goods and emergency units (military or civilian), storage and distribution of essential needs (mainly food and water) and commodities, providing shelter, and finally ensuring medical treatment and evacuation.

The *Regimiento de Apoyo e Intervención en Emergencias* (Support and Intervention in Emergencies Regiment) is the main UME unit in charge of providing logistics support to affected population and emergency units. Its tasks are logistic reinforcement in supply, maintenance, transportation, health, material recovery, logistics management, and camp building.<sup>148</sup> This unit provides the necessary support of accommodation, meals, and other basic needs for a limited period.<sup>149</sup> The main means involved are tents, kitchens, toilets, sanitation, and electrical

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<sup>148</sup> Ministerio de Defensa de España, Defense Order 896/2013, 16 May 2013, por la que se modifica la estructura orgánica y el despliegue de la Unidad Militar de Emergencias, que figura en el Real Decreto 416/2006, de 11 de abril, por el que se establece la organización y el despliegue de la Fuerza del Ejército de Tierra, de la Armada y del Ejército del Aire, así como de la Unidad Militar de Emergencias, y se modifica la Orden DEF/1766/2007, de 13 de junio, por la que se desarrolla el encuadramiento, organización y funcionamiento de la Unidad Militar de Emergencias, *Boletín Oficial del Estado*, no. 124 (Madrid: Ministerio de Defensa de España, 24 May 2013), 39271.

<sup>149</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2014*, 33.

generators.<sup>150</sup> The Red Cross is to complete the capabilities of displaced person's camps. Moreover, all five Emergency Intervention Battalions are capable of supporting the affected population with essential needs distribution. The UME has a limited shelter capability (about 5,000 people), ground transportation, and helicopter lift.<sup>151</sup>

The UME does not have an organic medical unit designed to treat and evacuate the affected population in an emergency (see figure 1). The organic medical unit is designed to only provide care for UME personnel; only in the most exceptional circumstances does it provide aid to civilian patients. To address this issue, agreements to fulfill this shortage have been established with the rest of the Armed Forces or other medical organizations. In 2008, the Red Cross signed a specific agreement to provide health and psychosocial support to all UME exercises, as well as to any displaced persons camps during a UME intervention. The UME has limited logistic general support capabilities and very exceptional medical support. If needed, and in accordance with the magnitude of the disaster, the rest of the armed forces will fill the gaps like distribution points, medical support, transportation, extra sheltering, or other logistical need. This issue forced the Chairman of the Joint Chief of Staff to sign Directive 05/08 about the employment of the armed forces in emergencies produced in cases of serious risk, catastrophe, public calamity or other public needs, and about the way to reinforce UME capabilities with other military means.<sup>152</sup>

The UME takes into consideration US lessons learned about prioritizing and employing ground transportation rather than airlift, setting a robust distribution capability, and having a reliable and trained system to receive external support coming from other actors on side.

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<sup>150</sup> In UME doctrine, sheltering and electricity remains under the realm of support to affected population rather than engineers support.

<sup>151</sup> Unidad Militar de Emergencias, *Unidad Militar de Emergencias: dossier 2012*, 22.

<sup>152</sup> Álvaro Kromer Espejo, "Operaciones en territorio nacional: apoyo a autoridades civiles y fuerzas y cuerpos de seguridad del estado," *Revista Ejército* no. 842 (May 2011): 14.

Therefore, the UME accomplishes the case studies' requirements in support to the affected population and emergency units with the fundamental support from the rest of the armed forces and civilian organizations like the Red Cross.

Finally, the US case studies highlighted the human dimension of the military relief effort. In addition to traditional virtues such as leadership, discipline, hierarchy, or spirit of service, the US forces applied recent wartime experiences where unpredictable and stressful situation frame their employment. The UME members shared the same human approach. In fact, the UME motto is "To serve", and most of its personnel has joined, in their previous assignments, offshore operations in places like the Balkans, Iraq, or Afghanistan.

### **Conclusion**

Historically, both American and Spanish military units have participated in major disasters to support not only the affected population and property, but also complementing the civilian emergency management structure. Even when such missions were not part of their daily training program, those units were able to achieve success due to their military spirit of service, preparation, equipment, mass employment, and decisive principles of unity, discipline, and hierarchy. During crises, where confusion, lack of information, and immediate action is required, military units provided a great value to the overall relief effort. Additionally, as Alex Muxo, city manager of Homestead (Florida) in 1992, testified in the US Senate committee about Hurricane Andrew, "If it wasn't for the response of the military and the help that we got, I don't know where we would be today." The presence of the armed forces by itself favors the resolution of the emergency situation.<sup>153</sup>

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<sup>153</sup> US Congress, Senate, *Lessons learned from Hurricane Andrew*, 39.

Nowadays, citizens are highly concerned about their personal and property safety. The collective sense of security has given way to a more intensified individualist approach. Thus, they demand professional emergency management at all levels. The most modern and advanced nation in the world, the United States of America, holds and promotes the involvement of military resources through the National Guard and the rest of the armed forces in major disasters for the sake of the nation. In the last twenty-three years, three enormous hurricanes (Andrew, Katrina, and Sandy) in Continental United States have challenged the local, state, and federal response. These storms tested, improved, and ultimately proved the utility of military units to provide humanitarian relief and support. Thanks to a responsible and professional After Action Reports and Lessons Learned, the Department of Defense and subordinate units have been able to enhance their participation and doctrine to support civil authorities.

In 2005, Spain responded to the need to amend the national civil protection system. The decision taken was to create a new specialized unit to be the operational cornerstone of the national response to natural and manmade disasters. With some controversy, the UME was born inside the Spanish armed forces. After eight years and more than 270 interventions, it was time to figure out whether its capabilities matched with what civilian authorities require from the military during a major disaster. Although the American and the Spanish systems are different and the involvement of military units in major disaster does not define the same approach, there are enough similarities to validate the UME existing capabilities throughout the analysis of representative case American studies.

The research demonstrates that the UME provides a reliable Command and Control capability to deal with all kind of major disasters. It is not only capable to deploy a reliable scalable headquarters on site to control own and external units, but also to support other emergency centers with material and specialized personnel. In relation with specialized units in direct intervention, the UME has a robust capability in SAR and HAZMAT operations, but it has



some shortages in engineer support, and law and order enforcement capability.<sup>154</sup> This circumstance requires the UME to fulfil the gap with cooperations, agreements, and training with other military units, and with national police corps. Finally, UME provides limited support to affected population and emergency teams in the disaster area. Thus, UME needs to foresee reinforcements within the Ministry of Defense and other civilian actors like the Red Cross.

To conclude, the *Unidad Militar de Emergencias* adds value within the Spanish national civil protection system. It is capable of providing specialized means and capabilities with foreseen reinforcements, if needed, coming from the rest of the armed forces and civilian organizations. The UME's military essence provides the decisive principles of unity of command, discipline, and an established hierarchy in stressful emergencies.

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<sup>154</sup> As explain above, the research has not evaluated the wildfire fighting capability due to its irrelevance in all three case studies. Nevertheless, civil authorities highly demand this capability and is highly developed within the UME

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